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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,470	05/17/2007	Barrie Dudley Brewster	M04B107	8791
71134 7590 09/24/2010 Edwards Vacuum, Inc. 2041 MISSION COLLEGE BOULEVARD SUITE 260 SANTA CLARA, CA 95054				
EXAMINER				
BURCH, MELODY M				
ART UNIT		PAPER NUMBER		
3657				
NOTIFICATION DATE		DELIVERY MODE		
09/24/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LORETTA.SANDOVAL@EDWARDSVACUUM.COM

# Office Action Summary

**Application No.**

10/588,470

**Applicant(s)**

BREWSTER, BARRIE DUDLEY

**Examiner**

Melody M. Burch

**Art Unit**

3657

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 and 32-38 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-30 and 32-38 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 01 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date 8/1/06  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notes of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement filed 8/1/06 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Examiner did not find a copy of the non-patent literature "Pump with Vibration Damper..." unnumbered and listed on pg. 3 of the IDS.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of the other end of the resistive element being directly attached to the second radially extending flange as recited in claim 29 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Examiner notes that in figure 8 Applicant shows one end of the of the resistive element 38 being attached to the first radially extending flange 31 via a support member 36 (claim 27) and the other end of the resistive element 38 being attached to the second radially extending flange 32. Examiner notes; however, that the other end of the resistive element is not shown to be

*directly* attached to the second radially extending flange 32 since it is instead attached to a pin-like structure attached to a block attached to the second radially extending flange 32.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37

CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

### ***Specification***

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Since this application was filed after September 21, 2004, a preliminary amendment that is present on the filing date of the application is part of the original disclosure of the application. MPEP 714.01(e) II. Therefore, the preliminary amendment of 8/1/06 changing the phrase in independent claims 1 and 18 "isolating from the ambient atmosphere, fluid drawn from the apparatus by the pump" to --isolating fluid drawn from the apparatus by the pump from the ambient atmosphere-- results in the latter phrase forming part of the original disclosure of the application. Examiner notes; however, that the language set forth in the latter phrase does not appear in the specification. In fact, only the language of the former phrase appears in the specification.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 6, 7, 14, 15, 32, and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 6. Claim element "means for connecting the damper" is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function. The specification does not clearly link the "means for connecting the damper" to a particular structure. It is unclear whether it is the bellows, the entire bellows arrangement, or the flanges.

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or

(c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification that perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Re: claim 14. The phrase "the extension limiting means" in line 2 is indefinite. It is unclear whether Applicant intends to refer to the means for limiting axial extension or compression since claim 14 depends from claim 7 which depends from claim 6 which depends from claim 1 which recites the means for limiting axial compression. The means for limiting axial extension is first recited in claim 9.

Re: claim 30. Claim element "means for contacting" is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written

description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function. The specification does not clearly link the "means for contacting" to a particular structure. The specification includes the phrase "means for contacting" in paragraph [0014] but it is unclear to the Examiner as to which structure performs the means for contacting.

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or

(c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification that perform the claimed function.

For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

The remaining claims are rejected due to their dependency from one of claims 6 and 14.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-8 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6065780 to Hiroshima in view of US Patent 3000389 to Alsager et al., 3799531 to Yamazaki et al., and 4755025 to Cutburth.

Re: claims 1-7 and 16-18. Hiroshima shows in figure 3(a) a vibration damper for inhibiting transfer of vibration to an apparatus during the evacuation thereof by a pump 300, the damper comprising a bellows arrangement 11-13 for isolating fluid drawn from the apparatus by the pump from the ambient atmosphere, and means 30 for limiting axial compression of the bellows arrangement during use of the damper, wherein the damper is axially compressed.

Hiroshima is silent with regards to the means for limiting axial compression being a resistive element in the form of a spring exerting tension with relative movement as set forth by the instant disclosure.

Alsager et al. teach in the figure the use of a vibration damper associated with a pump 15 and a bellows arrangement 30 having a means for limiting axial compression being in the form of a resistive element (the elastomeric buffer portion of element 35 shown below elements 40, 41 connected to element 36) exerting tension with the relative movement.

Yamazaki et al. teach in figures 3 and 4 and in col. 3 lines 44-45 that an elastomeric buffer for relative movement may be replaced with a coil spring buffer for relative movement.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the means for limiting axial compression of



Hiroshima to have included a means, as taught by Alsager et al. and Yamazaki et al., in order to provide a functionally equivalent means of limiting relative axial movement to prevent an excessive compressive load from being placed on the bellows.

Hiroshima, as modified, is silent with regards to the damper being axially pre-compressed.

Cutburth teaches in col. 4 lines 6-10 the limitation of bellows of a damper being precompressed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the damper of Hiroshima, as modified, to have been precompressed, as taught by Cutburth, in order to provide a means of eliminating the adverse effect of the vacuum load on vibration isolation as suggested by Cutburth.

Re: claim 8. Hiroshima, as modified, teach in Hiroshima the limitation wherein the bellows arrangement defines at least part of a flow path 14 for fluid drawn from the apparatus by the pump.

10. Claims 9-15, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6065780 to Hiroshima in view of US Patent 3000389 to Alsager et al., 3799531 to Yamazaki et al., and 4755025 to Cutburth as applied above, and further in view of Admitted Prior Art figures 1 and 2 (APA).

Hiroshima, as modified, is silent with regards to the damping having means for limiting axial extension of the bellows arrangement.

APA teaches the use of means for limiting axial extension of the bellows arrangement in the form of straps 6a, 6b.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the damper of Hiroshima, as modified, to have included means for limiting axial extension of the bellows arrangement, as taught by APA, in order to prevent breakage of the bellows due to excessive extension.

11. Claims 19-30 and 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6065780 to Hiroshima in view of US Patent 3000389 to Alsager et al., 3799531 to Yamazaki et al., and 4755025 to Cutburth as applied to one of the claims above, and further in view of US Patent 5090746 to Holzhausen.

Re: claims 19-23 and 34-38. Hiroshima, as modified, is silent with regards to the resistive means being arranged about (interpreted as around) the damper.

Holzhausen teaches in figures 1 and 3 the limitation wherein resistive means 8 are shown to be arranged about the damper.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the resistive means of the damper of Hiroshima, as modified, to have been arranged about the damper, as taught by Holzhausen, in order to provide a means of arranging the resistive means in an area where they can be easily accessible for replacement or repair.

Re: claim 24. Hiroshima, as modified, is silent with regards to the resistive element being metal.

Holzhausen teaches the use of resistive elements 8 being made of metal.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the material of the coil tension spring of

Hiroshima, as modified, to have been metal, in view of the teachings Holzhausen, in order to provide a means of using a material that has greater structural integrity for improved device life.

Re: claim 25. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the resistive elements to have been inclined in view of *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). The change in position of the elements would not change the operation of the elements because whether in an inclined or longitudinal position, the elements will still serve to limit compression.

Re: claims 26-30. Hiroshima, as modified, teaches in Alsager the limitation wherein one end of the resistive element or bottom rubber element 35 is attached to the first radially extending flange 25 via a support member 38 which extends through an aperture in the second radially extending flange 36.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified each resistive element of Hiroshima, as modified, to have been arranged, as taught by Alsager, in order to provide a means of securely connecting two components to help prevent decoupling.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 5992896 to Davey et al. teach the use of a coupler arrangement wherein springs are precompressed, 4928998 to Brandener teach the use of a coupler arrangement wherein there are coil springs extendable to limit compression

between two plates, 4352643 to Iijima and US Patent Applications 2005/0106043 to Casaro et al. and 2005/0013703 to Cafri et al teach the use of pump arrangements with vibration dampers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb  
September 20, 2010

/Melody M. Burch/  
Primary Examiner, Art Unit 3657

